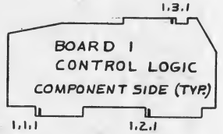
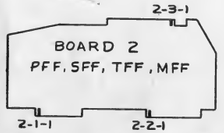
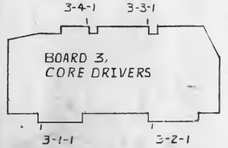
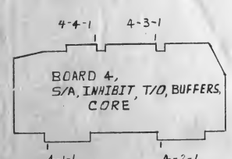
SYM	REVISIONS	APPROVED	DATE

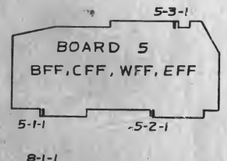
D - 66599-06

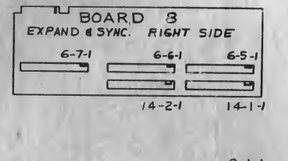


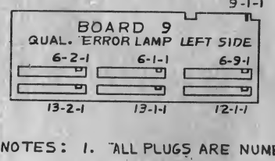


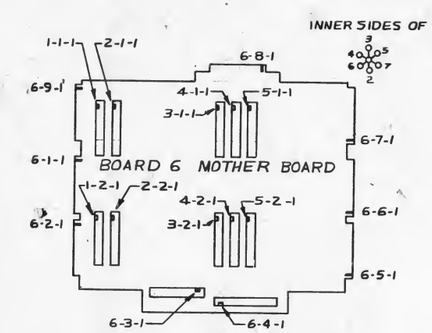


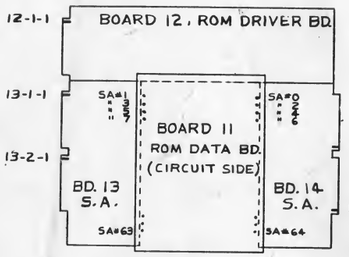












ASS'Y 7

BOARD 1, PLUG 3

A	NSST	1 NSST
B	YSST	2 YSST
C	LNRUN	3 LNRUN
D	LSC4	4 LSC4
E	LSTO	5 LSTO
F	LRDR	6 LRDR
H	-2.4V	7 -2.4V
J	LSRS	8 LSRS
K	ROM CLK	9 ROM CLK.
L	F.F. CLK.	10 FF CLK
M	TPA	11 TPA
N		12
P		13
R		14
S	GND	15 GND

BOARD 3, PLUG 1

A	-15	1 -15
B	GND	2 GND
C	-2.4	3 -2.4
D	ROM CLK.	4 GND
E	FF CLK	5 FF CLK
F	F45	6 J45
H	K45	7 K45
J	LROM	8 LROM
K	F45	9 F45
L	YW02201	10 YW02201
M	YC022200	11 YC022200
N	F52 F34	12 F52 F34
P		13
R	YC022211	14 YC022211
S	E52 F34	15 E52 F34
T	YC022201	16 YC022201
U	YC022210	17 YC022210
V		18
W	YC000022	19 YC000022
X	YC001222	20 YC001222
Y	YC011122	21 YC011122
Z	YC01022	22 YC01022

BOARD 4, PLUG 2

A-M7	1	M3
B	Q	2 Q
C	b	3 M8
D	c	4 M4
E	e	5 M2
F	M2	6 M1
H	X,Z	7 M5
J	T	8 M6
K	Y, Z$_C$	9 M9
L	Y$_C$, P	10 f
M	WORD-COM	11 WORD-COM
N	IOE2	12 IOE2
P		13
R		14
S	IWTM	15 IWTM
T	GND	16 GND
U	F22B	17 F22B
V	F22	18 F22
W	F21B	19 F21B
X	F21	20 F21
Y	F20B	21 F20B
Z	F20	22 F20

BOARD 5, PLUG 3

A	-2.4V	1 -15V
B	F44	2 E44
C	F43	3 E43
D	F42	4 E42
E	F41	5 E41
F	F40	6 E40
H	F70	7 E70
J	F71	8 E71
K	F72	9 E72
L	F73	10 E73
M	F34	11 E34
N	F33	12 E33
P	F32	13 E32
R	F31	14 E31
S	F30	15 E30
T	F20	16 E20
U	F21	17 E21
V	F22	18 E22
W	F23	19 E23
X	F24	20 E24
Y	F25	21 E25
Z	N1B	22 GND

BOARD 6, PLUG 4

A	=1 NKDN	
B	=2 YRUN	
C	=3 YRAD	
D	=4 YSKD	
E	=5 YKDN	
F	=6 -15V	
H	=7 YINH	
J	=8 GND	
K	=9 YPSE	
L	=10 NK23	
M	=11 NK22	
N	=12 NK21	
P	=13 NK20	
R	=14 NK24	
S	=15 NK25	
T	=16 YFXD	
U	=17 YDC3	
V	=18 YDC1	
W	=19 YDC2	
X	=20 YDCO	
Y	=21 ISTP	
Z	=22 YFLT	

BOARD 6, PLUG 8

A	NK05	1	NK24
B	NHLD	2	NK20
C	YRAD	3	NK21
D	YFLT	4	NK22
E	YRUN	5	NK23
F	HOUT	6	HFMT
H	F20B	7	F21B
J	F22B	8	F23B
K	F24B	9	F25B
L	NFLT	10	
M	ITBB	11	ISTP
N	IADV	12	ICHF
P	IOFF	13	F41B
R	YINH	14	F40B
S	YKDN	15	YCOD
T	YGNPS	16	YDSP
U	YSKIC	17	YCHA
V	YAFZ	18	NDGO
W		19	SPARE 3
X	GND	20	GND
Y	SPARE 2	21	SPARE 1
Z	-15V	22	-15V

BOARD 13, PLUG 2

A	LCO6	1	LCO6
B	ISCL(+)	2	ISCL(-)
C	ISQL(+)	3	ISQL(-)
D	LIQM	4	LIQM
E	LIQN	5	LIQN
F	LQC4	6	LQC4
H	LQC5	7	LQC5
J	LQC1	8	LQC1
K	BIAS	9	BIAS
L	LQC3	10	LQC3
M	LQC2	11	LQC2
N	LQS1	12	LQS1
P	LQS2	13	LQS2
R	LQS3	14	LQS3
S	LQS4	15	LQS4
T	LQS5	16	LQS5
U	LQS6	17	LQS6
V	LQS7	18	LQS7

BOARD 2, PLUG 1

A	-15V	1 -15V
B	GND	2 GND
C	-2.4V	3 -2.4V
D	HIPS	4 F.F.CLK.
E	J13	5 E13
F	K13	6 F13
H	J12	7 E12
J	K12	8 F12
K	J11	9 E11
L	K11	10 F11
M	J10	11 E10
N	K10	12 F10
P	J04	13 E04
R	K04	14 F04
S	J03	15 E03
T	K03	16 F03
U	J02	17 E02
V	K02	18 F02
W	J01	19 E01
X	K01	20 F01
Y	J00	21 E00
Z	K00	22 F00

BOARD 3, PLUG 2

A	M-3	1	M-7
B	Q	2	Q
C	M8	3	b
D	M4	4	c
E	M0	5	e
F	M1	6	M2
H	M5	7	X,Z
J	M6	8	T
K	M9	9	Y, Z$_C$
L	f	10	Y$_C$, P
M	WORD COMM	11	M$_C$
N	GND	12	GND
P	YW22210	13	YW22210
R	YW22200	14	YW22200
S	YW22201	15	YW22201
T	YW22211	16	YW22211
U	YW21022	17	YW21022
V	YW22022	18	YW22022
W	YW20022	19	YW20022
X	YW21122	20	YW21122
Y	E44	21	E44
Z	F44	22	F44

BOARD 4 PLUG 3

A	IWTM'	1	IWTM'
B	YCOMM	2	YCOMM
C	D4	3	D5
D	D6	4	-D8
E	D2	5	-IA1
F	D1	6	IA2
H	-GO	7	D7
J	IA1	8	DO
K	-D2	9	-DO
L	D3	10	E1, Es
M	GO	11	G1
N	EO	12	D8
P	D9, DS	13	-D1
R	-D4	14	-E1, -Es
S	-D7	15	-D9, -Ds
T	D5	16	-IA2
U	-D6	17	-EO
V	-D3	18	-G1

BOARD 6, PLUG 1

A	GND	1	60CPS
B	RS. SEN.	2	RS. SEN.
C	LDI3	3	FF. CLK.
D	ISDL(-)	4	LDI2
E	ISDL(+)	5	LDI1
F	LDI0	6	LDI0
H	LAI3	7	LAI3
J	ISAL(-)	8	LAI2
K	ISAL(+)	9	LAI1
L	LAI0	10	LAI0
M	ISPL(-)	11	LPO1
N	ISPL(+)	12	LPO0
P	LCO1	13	YDSP
R	LCO0	14	YCHA
S	LCO5	15	LCO5
T	LCO4	16	LCO4
U	LCO2	17	LCO2
V	LCO3	18	LCO3

BOARD 6, PLUG 5

A	LQ42-43	1	LJ44
B	LK41	2	LTEW
C	LJ41	3	LGEE
D	LK40	4	LIEF
E	LJ40	5	LDEF
F	LEEC	6	LEEC
H	LIOE1	7	LIOE1
J	LIOE2	8	LIOE2
K		9	
L	LJ34	10	LJ34
M	LK24	11	LK24
N	LE3F	12	LESF
P	LJ50	13	LJ50
R	LQ53-54	14	LQ53-54
S	LQ52-54	15	LQ52-54
T	LJ51	16	LJ51
U	LK50	17	LK51
V	ISIL(-)	18	LSIL(+)

BOARD 6, PLUG 9

A	-15V	1	-15V
B	GND	2	GND
C	-2.4V	3	-2.4V
D	ƵDMV	4	ƵDHD
E	ƵDRL	5	ƵDRD
F	ƵDHL	6	F25
H	ƵDSL	7	ƵDRV
J	ƵACE	8	HDRR
K	LRCY	9	ROM CLK.
L	E13	10	F13
M	E12	11	F12
N	E11	12	F11
P	E10	13	F10
R	E04	14	F04
S	E03	15	F03
T	E02	16	F02
U	E01	17	F01
V	E00	18	F00

BOARD 14, PLUG 1

A	LQ42-43	1	LQ42-43
B	LK41	2	LK41
C	LJ41	3	LJ41
D	LK40	4	LK40
E	LJ40	5	LJ40
F	LIE2	6	LIE2
H	LIEO	7	LIEO
J	LIE3	8	LIE3
K	LIE1	9	LIE1
L	LJ34	10	LJ34
M	LK24	11	LK24
N	LESF	12	LESF
P	LJ50	13	LJ50
R	LQ53-54	14	LQ53-54
S	LQ52-54	15	LQ52-54
T	LJ51	16	LJ51
U	LK51	17	LK50
V	ISIL(-)	18	ISIL(+)

BOARD 1, PLUG 1

A	-15	1	-15V
B	GND.	2	GND
C	-2.4	3	-2.4
D	F.F. CLK.	4	F.F.CLK.
E	LRCY	5	LRCY
F	LSRS	6	LSRS
H	ROM CLK.	7	ROM CLK.
J	LRDR	8	LRDR
K	LSTO	9	LSTO
L	P.S.SEN.	10	P.S. SEN.
M	LTMS	11	LTMS
N	LTBS	12	LTBS
P		13	
R	LIBF	14	LIBF
S	LSC3	16	LSC3
T		17	
U		18	
V	LSC1	19	LSC1
W	LSC2	20	LSC2
X	LTBA	21	LTBA
Y		22	

BOARD 2, PLUG 2

A	U50	1	E50
B	K50	2	F50
C	U51	3	E51
D	K51	4	F51
E	U52	5	E52
F	K52	6	F52
H	U53	7	E53
J	K53	8	F53
K	U54	9	E54
L	K54	10	F54
M	U60	11	E60
N	K60	12	F60
P	U61	13	E61
R	K61	14	F61
S	U62	15	E62
T	K62	16	F62
U	U63	17	E63
V	K63	18	F63
W	U64	19	E64
X	K64	20	F64
Y	U65	21	E65
Z	K65	22	F65

BOARD 3, PLUG 3

A	IWTM'	1	IWTM'
B	YCOMM	2	YCOMM
C	D5	3	D4
D	-D8	4	D6
E	-IA1	5	D2
F	IA2	6	D1
H	D7	7	-GO
J	DO	8	IA1
K	-DO	9	-D2
L	E1, Es	10	D3
M	G1	11	GO
N	D8	12	EO
P	-D1	13	D9, Ds
R	-E1, -Es	14	-D4
S	-D9, -Ds	15	-D7
T	-IA2	16	-D5
U	-EO	17	-D6
V	-G1	18	-D3

BOARD 5, PLUG 1

A	-15V	1	-15V
B	GND	2	GND
C	-2.4V	3	-2.4V
D	HIB	4	F.F. CLK.
E	J25	5	E25
F	K25	6	F25
H	J24	7	E24
J	K24	8	F24
K	J23	9	E23
L	K23	10	F23
M	J22	11	E22
N	K22	12	F22
P	J21	13	E21
R	K21	14	F21
S	J20	15	E20
T	K20	16	F20
U	J30	17	E30
V	K30	18	F30
W	J31	19	E31
X	K31	20	F31
Y	J32	21	E32
Z	K32	22	F32

BOARD 6, PLUG 2

A	LCO6	1	LCO6
B	ISCL(-)	2	ISCL(+)
C	ISQL(-)	3	ISQL(+)
D	LIQM	4	Y5KIC
E	LIQN	5	LIQN
F	HQC4	6	HQC4
H	HQC5	7	HQC5
J	Y7COD	8	HQC1
K	J62	9	J62
L	HQC3	10	HQC3
M	HQC2	11	HQC2
N	LQS1	12	LQS1
P	LQS2	13	LQS2
R	LQS3	14	YGNPS
S	LQS4	15	LQS4
T	LQS5	16	LQS5
U	LQS6	17	LQS6
V	LQS7	18	LQS7

BOARD 6, PLUG 6

A	LTBS	1	LTBS
B	LIWF	2	LIWF
C	LCCF	3	LCCF
D	LICF	4	LICF
E	LTBC	5	LTBC
F	LDCF	6	LDCF
H	LTOC1	7	LTDC
J	LRDR	8	LRDR
K	LM23	9	LM23
L	LTKB	10	LTKB
M	LTSB	11	LTSB
N	LTCB	12	LTCB
P	LSTO	13	LBRS
R	LK25	14	LKBF
S	LJ24	15	LIBF
T	LJ25	16	LDBF
U	LOUT	17	LCBF
V	LJBF	18	LJBF

BOARD 12, PLUG 1

A	-15V	1	-15V
B		2	
C		3	
D	RCY	4	
E	ROM CLK	5	
F		6	
H	E13	7	E00
J	E12	8	F00
K	F13	9	F02
L	F11	10	E04
M	F03	11	E01
N	E03	12	F01
P	E02	13	E02
R	E01	14	E11
S	GND	15	GND
T	GND	16	GND
U	GND	17	GND
V	GND	18	GND

BOARD 14, PLUG 2

A	LIC2	1	LIC2
B	LICO	2	LICO
C	LIC3	3	LIC3
D	LIC1	4	LIC1
E		5	
F	BIAS	6	BIAS
H	LIB2	7	LIB2
J	LIB0	8	LIB0
K	LIB1	9	LIB1
L	LIB4	10	LIB4
M	LIB3	11	LIB3
N	LSTO	12	LSTO
P	LK25	13	LK25
R	LJ24	14	LJ24
S	LOUT	15	LJ25
T	-15V	16	-15V
U	GND	17	GND
V		18	

BOARD 1, PLUG 2

A	LSC4	1	LTSB
B	LRDM	2	LRDM
C	ISDL(-)	3	ISDL(+)
D	ISAL(-)	4	ISAL(+)
E	ISPL(-)	5	ISPL(+)
F	ISCL(-)	6	ISCL(+)
H	LHIPS	7	LHIB
J	ISQL(-)	8	ISQL(+)
K	ISIL(-)	9	ISIL(+)
L	LDBF	10	LDBF
M	LC60	11	LC60
N	F60	12	F60
P	LC61	13	LC61
R	F61	14	LNRUN
S	LC62	15	LC62
T	F62	16	LSAN
U	LC63	17	LC63
V	F63	18	YSST
W	LC64	19	LC64
X	F64	20	LWTM
Y	LC65	21	LC65
Z	F65	22	NSST

BOARD 2, PLUG 3

A	-2.4V	1	-15V
B	F65	2	LC65
C	F64	3	LC64
D	F63	4	LC63
E	F62	5	LC62
F	F61	6	LC61
H	F60	7	LC60
J	F54	8	LC54
K	F53	9	LC53
L	F52	10	LC52
M	F51	11	LC51
N	F50	12	LC50
P	F00	13	LC00
R	F01	14	LC01
S	F02	15	LC02
T	F03	16	LC03
U	F04	17	LC04
V	F10	18	LC10
W	F11	19	LC11
X	F12	20	LC12
Y	F13	21	LC13
Z	HIPS	22	GND.

BOARD 4, PLUG 1

A	-15	1	-15
B	GND	2	GND
C	-2.4	3	2.4
D	CHA	4	E11
E	F25	5	F25
F	F25B	6	E24
H	F24	7	F24
J	F24B	8	ADV
K	F23B	9	IOFF
L	F23	10	F23
M	F11	11	F11
N	IOC1	12	IOC1
P	GND	13	GND
R	IOE1	14	IOE1
S		15	
T	LSAN	16	LSAN
U		17	
V	F41B	18	F41B
W	IIBB	19	IIBB
X	F41	20	F41
Y	F40B	21	F40B
Z	F40	22	F40

BOARD 5. PLUG 2

A	J33	1	E33
B	K33	2	F33
C	J34	3	E34
D	K34	4	F34
E	J73	5	E73
F	K73	6	F73
H	J72	7	E72
J	K72	8	F72
K	J71	9	E71
L	K71	10	F71
M	J70	11	E70
N	K70	12	F70
P	J40	13	E40
R	K40	14	F40
S	J41	15	E41
T	K41	16	F41
U	J42	17	E42
V	K42	18	F42
W	J43	19	E43
X	K43	20	F43
Y	J44	21	E44
Z	K44	22	F44

BOARD 6, PLUG 3

A	GND	1	GND
B	-15V NOT	2	-15V NOT
C	-15V	3	-15V
D	F25	4	LDF5
E	F23	5	F24
F	F21	6	F22
H	E24	7	F20
J	E20	8	E23
K	NDGO	9	YKDN
L	YKDN	10	YRUN
M	YSKIC	11	
N	YGNPS	12	YDSP
P	NK23	13	NK23
R	NK22	14	NK22
S	NK21	15	NK21
T	NK20	16	NK20
U	NK24	17	NK24
V	NK25	18	NK25

BOARD 6, PLUG 7

A	SPARE 1	1	SPARE 1
B	SPARE 2	2	SPARE 2
C	SPARE 3	3	SPARE 3
D		4	
E		5	
F	NHLD	6	NHLD
H	YCPS	7	YCPS
J		8	
K	60 CPS	9	60 CPS
L	60CPS	10	60CPS
M		11	
N	ROM CLK.	12	ROM CLK.
P	GND NHLD	13	GND NHLD
R	YCPS	14	YCPS
S	NHLD	15	NHLD
T	-2.4V	16	-2.4V
U	GND	17	GND
V	-15V	18	-15V

BOARD 13, PLUG 1

A	GND	1	GND
B	-15V	2	-15V
C	LDI3	3	LDI3
D	LDI2	4	ISDL(-)
E	LDI1	5	ISDL(+)
F	LDI0	6	LDI0
H	LAI3	7	LAI3
J	LAI2	8	ISAL(-)
K	LAI1	9	ISAL(+)
L	LAI0	10	LAI0
M	LPO1	11	ISPL(-)
N	LPO0	12	ISPL(+)
P	LCO1	13	LCO1
R	LCO0	14	LCO0
S	LCO5	15	LCO5
T	LCO4	16	LCO4
U	LCO2	17	LCO2
V	LCO3	18	LCO3

BOARD 9, PLUG 1

A	-15V	1	-15V
B	GND	2	GND
C	ƵDHD	3	ƵDMV
D	ƵDRD	4	ƵDRL
E	F25	5	ƵDHL
F	ƵDRV	6	ƵDSL
H	HDRR	7	ƵACE
J		8	
K	60 CPS	9	
L	P.S. SEN.	10	ERROR LIGHT

BOARD 8 PLUG 1

A	SPARE 1	1	SPARE 1
B	SPARE 2	2	SPARE 2
C	SPARE 3	3	SPARE 3
D		4	
E		5	
F		6	
H		7	
J		8	
K	GND	9	GND
L	-15V	10	-15V

NOTES: 1. ALL PLUGS ARE NUMBERED, SOCKETS ARE REFERRED TO BY PLUG NO.
2. PINS ARE BY BOARD PLUG, i.e. 3-2-F = BOARD 3, PLUG 2, PIN F.
3. DRAWINGS REFER TO COMPONENT SIDE UNLESS NOTED.
4. PLUGS NUMBERED COUNTER CLOCKWISE.

ENG. RESP. — DIV.

UNLESS OTHERWISE NOTED — TOLERANCES — 0.XX ±0.02 0.XXX ±0.005 ANGULAR ± MACHINED SURFACES 63 — DO NOT SCALE —

ITEM	QTY	DESCRIPTION	PART NO.	DWG. NO.	MAT'L SPEC.

DRAWN: AL HOWARD — DATE: 6-10-69 — ENGINEER — APPROVED — SUPERSEDES

TITLE: INTERCONNECTIONS & BOARD REFERENCE LIST

FINISH — SCALE

HEWLETT PACKARD LABORATORY INSTRUMENTS

NEXT ASSY. 91008

C - - -

HP 9280-0004 * PRINTED ON DIEPO 1020-10

SYM	REVISIONS	D
		A

N M L K J H G F E D C B A

E13 J13 J12 J11 J10 J09 J03 J02 J01 J00 K13 K12 K11 K10 K04 K03 K02 K01 K00 K51 E12 E11 E10 E23 E31 E34 E21 E22 E32 E33 F11 F10 F25 F24 F22 F21 F31 F32 F33 F34 J25 J24 J23 J22 J21 J20 J30 J33 J31 J32 K25 K24 K23 K22 K21 K20 K30 K34 F13 F12 F30 E30 E00 E01 E02 E03 E04 E61 E50 E24 E25 E31 E23 E22 E21 E20 E00 E01 E02 E03 E04 E61 E50 E24 E25 E31 E23 E22 E21 E20

ZDMV (K04), (L07)

ZDRL ZACE ZDHL ZDMV

HDRA H.OUT

LTBS LD13 F25 E24 NKDN LD12 LD11 LD10 YBFN LA04 LA03 LA02 LPO1 LPO0 F22 F21 E31 E23 E22 E21 E20 E32 E33 E34 F11 F10 F25 F24 F22 F21 F31 F32 F33 F34 J25 J24 J23 J22 J21 J20 J30 J33 J31 J32 K25 K24 K23 K22 K21 K20 K30 K34

YC1021 YC1210 YC2111

HIP HIB

10 15 20 25 30 35 40 45

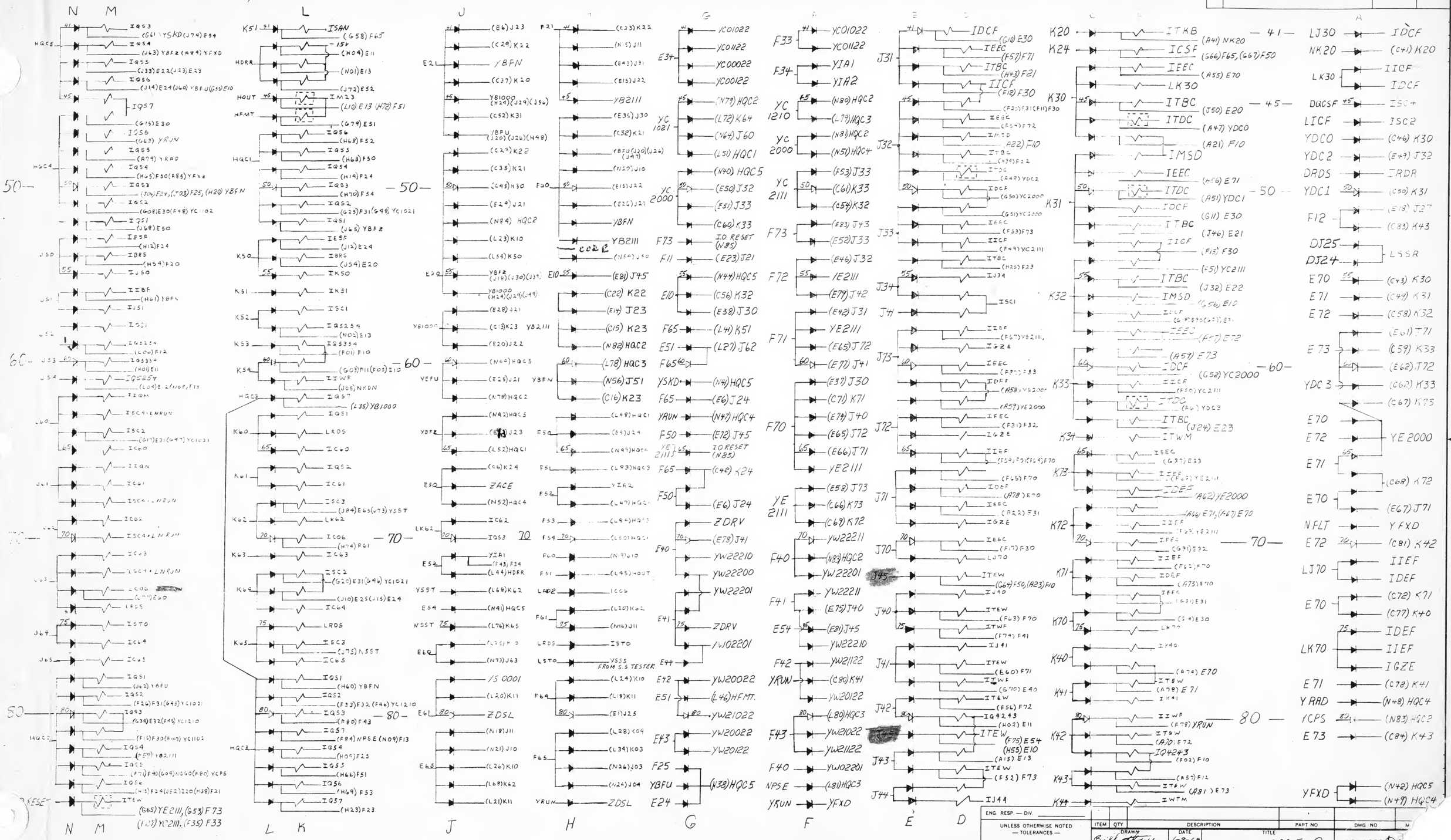
ENG. RESP. — DIV.

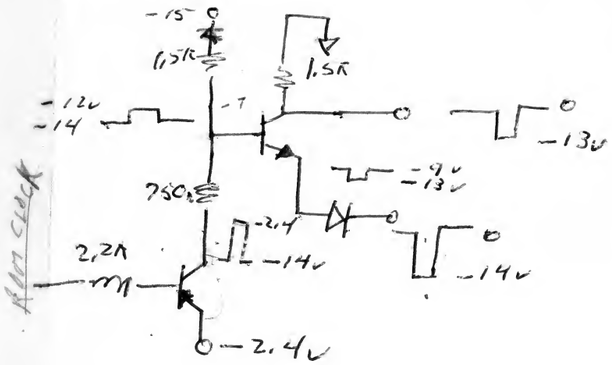
UNLESS OTHERWISE NOTED — TOLERANCES —
0.XX ±0.02 0.XXX ±0.005
ANGULAR ±
MACHINED SURFACES 63
— DO NOT SCALE —

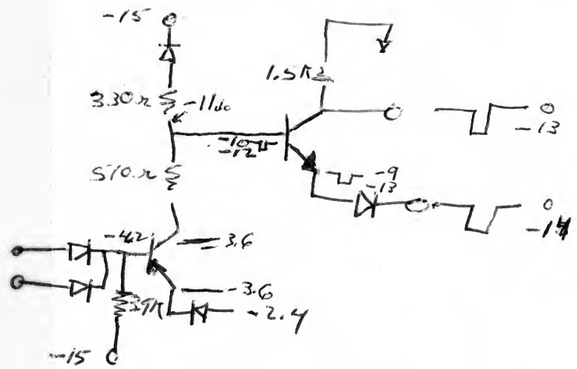
ITEM	QTY	DESCRIPTION	PART NO	DWG NO	MA

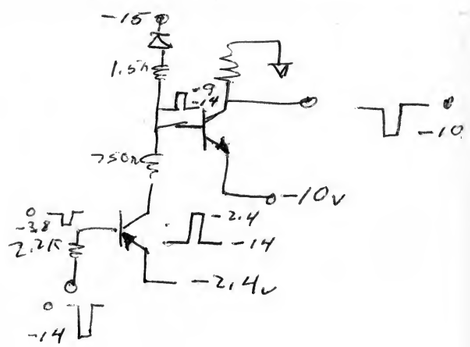
DRAWN	DATE	TITLE		
Bill Hayes	6-7-69	9100B	PAGE 1	HEWLETT
ENGINEER		INST BOARD		
APPROVED				
SUPERSEDES		FINISH	SCALE	

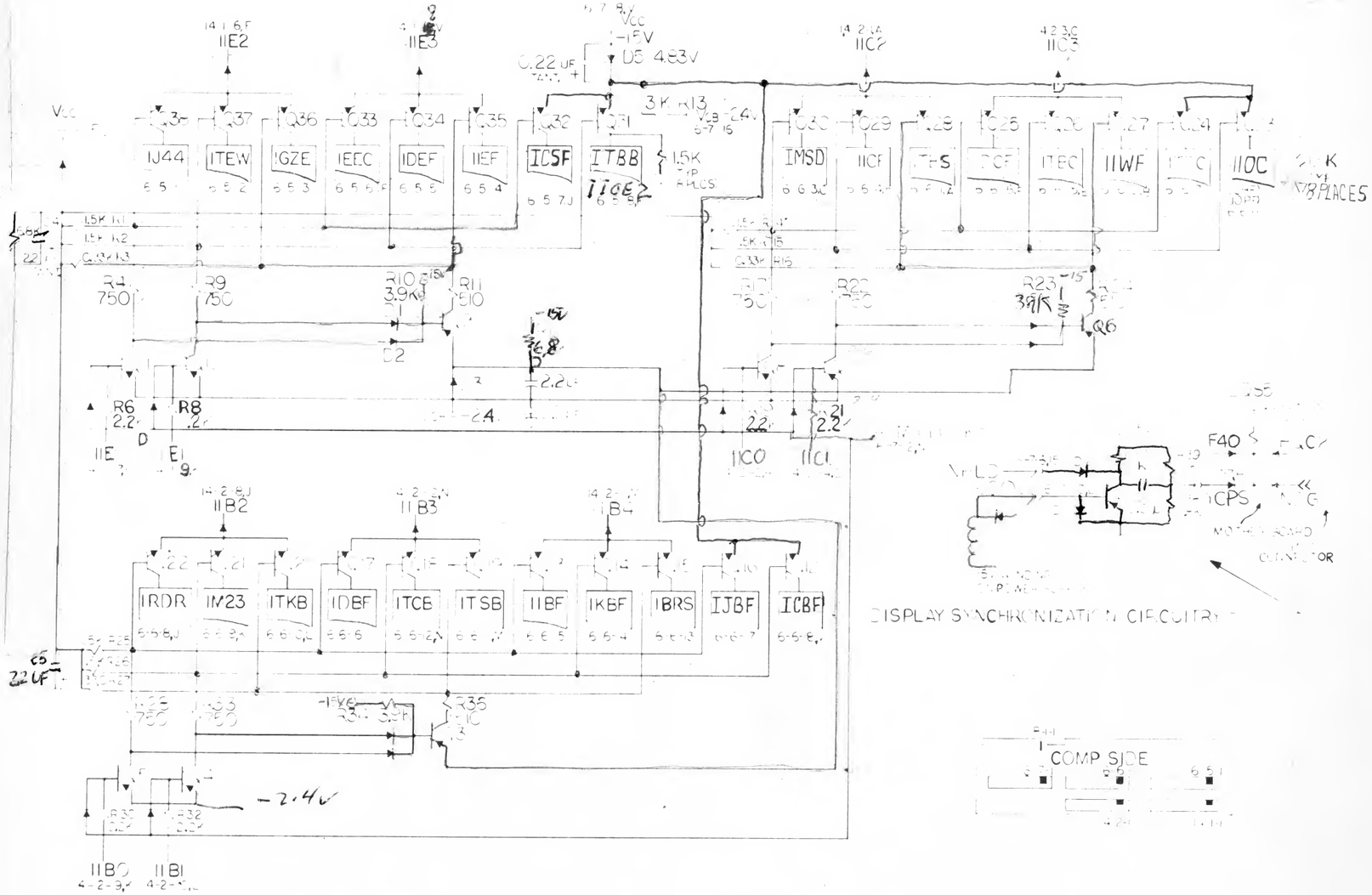
SYM	REVISIONS	APPROVED	DATE
	D-	-	-











DISPLAY SYNCHRONIZATION CIRCUITRY

9100B RIGHT SIDE BOARD EXPANDER
09100-66508

9100B

LEFT SIDE BOARD (QUALIFIER)
09100-66509

SYM	REVISIONS	APPROVED	DATE

9100 B

UNLESS OTHERWISE SPECIFIED:
1) ALL TRANSISTORS 5080-4663
2) ALL DIODES 1901-0040
3) ALL RESISTORS AB ¼WATT ± 5%

YCHA — 6-1-14
YCOD — 6-2-1
YGNPS — 6-2-14

1-IQS1 (13-2-12,N)
2-IQS2 (13-2-13,P)
3-IQS3 (13-2-14,R)
4-IQS4 (13-2-15,S)
5-IQS5 (13-2-16,T)
6-IQS6 (13-2-17,U)
7-IQS7 (13-2-V)

7 6 5 4 3 2 1

COMPONENT LOCATION

YBFZ YDNE YF54 YF24 YF50 YF52 — CFF=1001 — L52 L51 L50 L49 L48 L47 — HQC1 6-2-8

YBFU YEZR (Ds)YSIN (Es)YSIN YB2111 YSQK YSQC — BFF=0001 CFF=E0=1011 CFF=Ds=1010 CFF=Es=1101 YCPS·NDQ0·F40 F24·F21·E20 — N78 N79 N80 N81 N82 N83 N84 — HQC2 6-2-11,M

YBFN (G0)YGER YF43 YF25 YF51 YF53 YSQN YSQN YSQN YB1000 YB2102 YDZR YSQH YSQD YB1002 YSQL YSQL — BFF=1001 CFF=1110 — L78 L79 L80 L82 L83 L84 L81 L85 L62 — HQC3 6-2-10,L

YE50 YENE YSPR YSQB YRAD YRUN YE30 — CFF=E1=1100 YFXD·F50 — N52 N51 N50 N49 N48 N47 N46 — HQC4 6-2-6,F

— CFF=D2=0000 YFXD·YBFZ YBFU·E24·E10 YBFU·E24·F25 SPECIAL PROGRAM CALL — N39 N40 N41 N42 N43 N44 N38 N45 — HQC5 6-2-7,H

LQS8 13-2-18 — R R R R R 5.1K (TYP.) 20 19 18 17 16

D14 NDSP D12 YCHA D10 YCOD D8 YGNPS D6 YSKIC 6-2-4 — Q11 — -15V 5.1K R21 — 1K R22 — 1K R23 — YDSP 6-1-13

D15 D13 D11 D9 D7

LQC1 13-2-8,J -15V — R8 R7 Q5 Q6 R9

LQC2 13-2-11,M -15V — R2 R1 Q1 Q2 R3

LQC3 13-2-10,L -15V — R5 R4 Q3 Q4 R6

LQC4 13-2-6,F -15V — R14 R13 Q9 Q10 R15

LQC5 13-2-7,H -15V — R11 R10 Q7 Q8 R12

D23

D3 D1 D2 D5 D4 — IQAM (J62) 6-2-9,K

-15V — R24 2K 1K R25 — Q12 — 4.7K R26 — R27 2K — D28 — Q13 — Q14 2N3644 — R28 20K — D18 — D19 — D16 — -2.4VG — D17 — 6.8K R29 — SET

LQC1 13-2-8,J — LQS7 6-2-8,V

D20 — LQC4 13-2-6,F

D21 — LQC1 13-2-8,J

D22 — F/F CLOCK

R30 4.7K — LQS7 6-2-17,U — RESET

ERROR LITE 250 ma MAX

ERROR LAMP CIRCUITRY

60HZ 6-1-1 — 60HZ 14-1-K — R31 1.8K — C1 4.7µf (TANT) — -2.4V 6-9-3,B — -15V 9-1-,A — C2 4.7µf (TANT) — 9-1-3,B

9-1-1

COMP. SIDE

6-2-1 6-1-1 6-9-1

13-2-1 13-1-1 12-1-1

KEY BOARD CONNECTOR
09100-66532

RUN PROG — 5080-4659 — 10K — 2.2K — 4.7K — 470 — FXD — -15V — 10K — 6-4-3 — 6-4-2 — -15V 6-4-6 — 6-4-16 — 6-4-8 — 6-4-4

A79 — G63 — F85 — H16 — J17 — F22 — E21 — YB2102

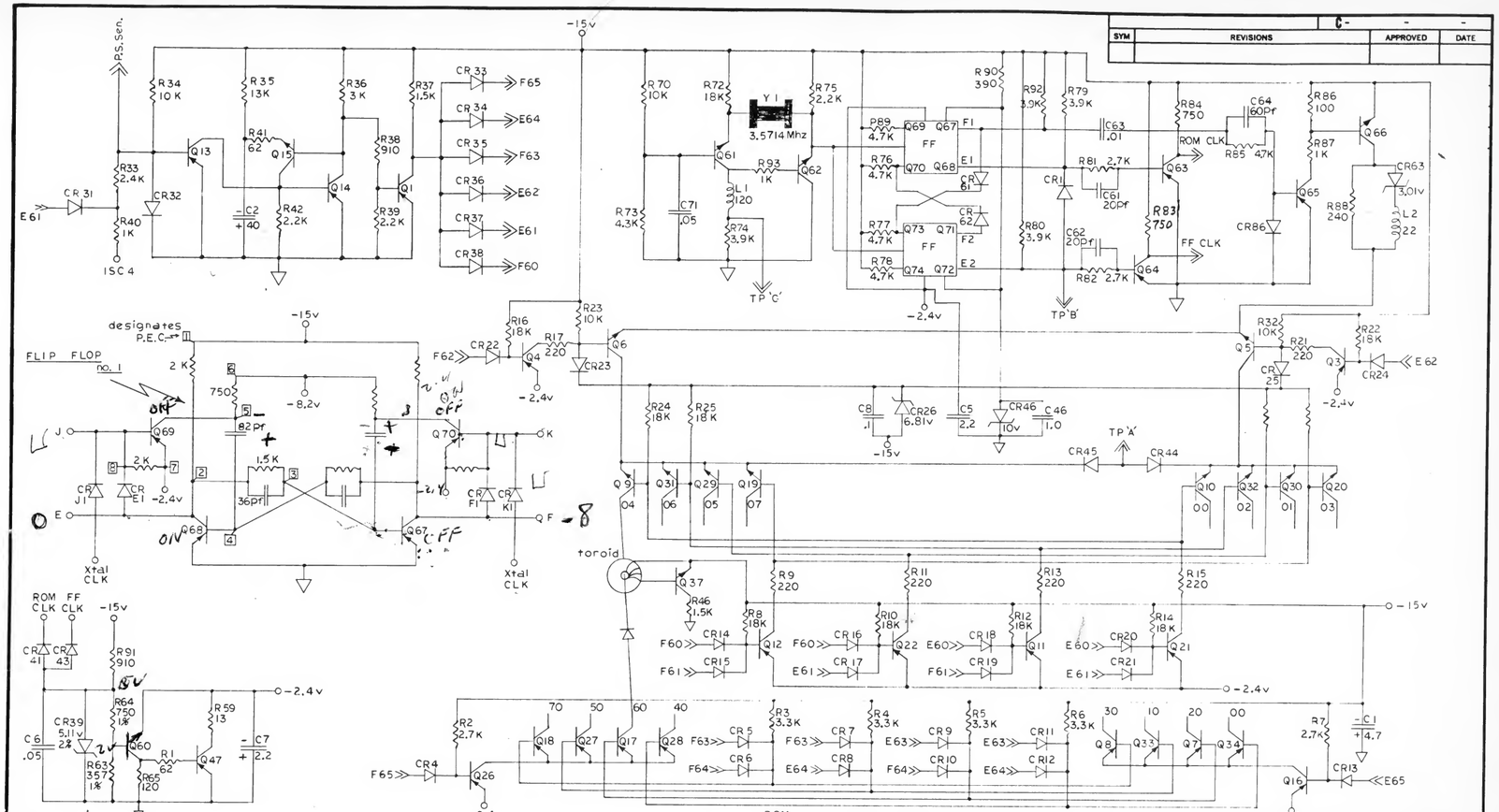
E33 G36 E32 G35 E31 G27 E30 G12 — G49 — YC2000

YSQD G61 — E54 J74

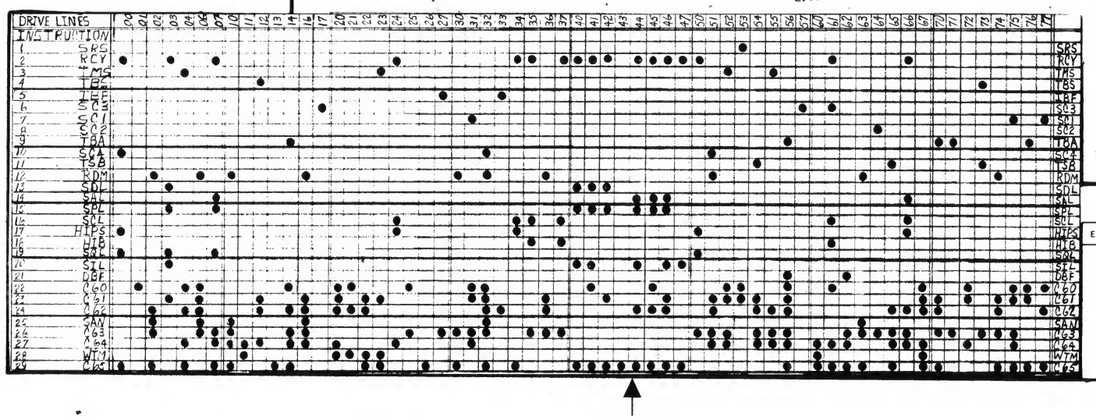
INSTRUCTION LOGIC BOARD
09100-66556

ENG. RESP. — DIV						
UNLESS OTHERWISE NOTED — TOLERANCES — 0 XX ±0.02, 0 XXX ±0.005, ANGULAR ±, MACHINED SURFACES 63 — DO NOT SCALE —	ITEM	QTY	DESCRIPTION	PART NO.	DWG NO.	MAT'L SPEC
AL HOWARD ENGINEER — DATE 6-2-9 — APPROVED — SUPERSEDES	TITLE: LEFT SIDE BOARD & QUALIFIER CIRCUITRY 556& 509 BOARDS				HEWLETT PACKARD LABORATORY INSTRUMENTS	
	FINISH	SCALE			NEXT ASSY. D-	

SYM	REVISIONS	APPROVED	DATE



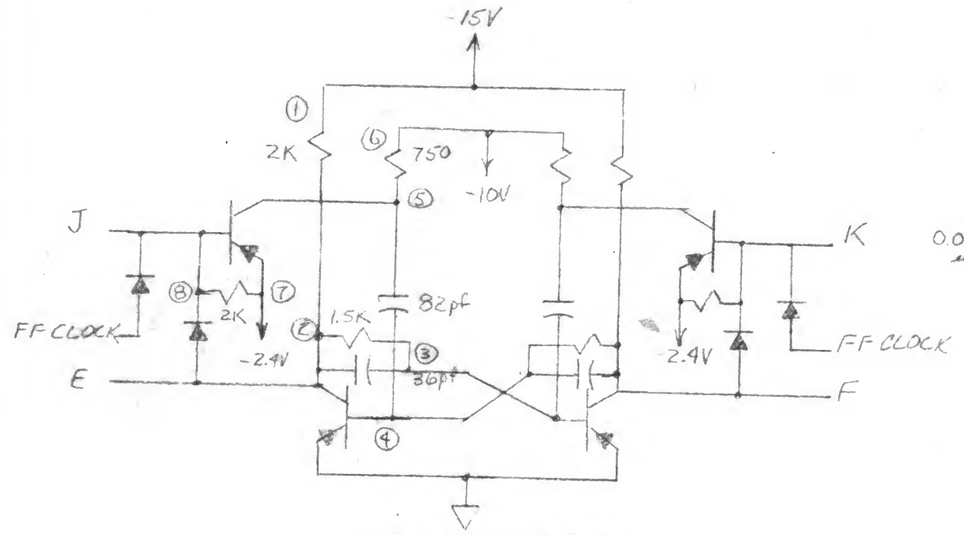
TOROID INSTRUCTION	SRS	RCY	TMS	ITBS	IIBF	ISC3	ISC1	ISC2	ITBA	ISC4	ITSB	IRDM	ISDL	ISAL	ISPL	ISCL	IMPS	IHIB	ISGL	ISIL	IDBF	IC60	IC61	IC62	IC63	IC64	IC65
TRANSISTOR	Q35	Q36	Q37	Q38	Q39	Q41	Q42	Q43	Q44	Q45	Q46						Q48	Q49				Q50	Q51	Q52	Q53	Q54	Q55	Q56
OUTPUT TERMINALS	3-G	1-S	1-M	1-N	1-R	1-T	1-W	1-X	1-Y	2-A	2-B	2-8	2-3	2-4	2-5	2-6	2-H	2-7	2-8	2-9	2-L	2-11	2-13	2-15	2-16	2-17	2-19	2-20



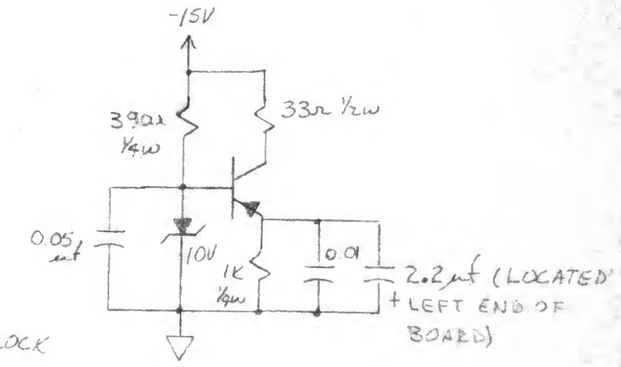
ENG. RESP. — DIV.						
UNLESS OTHERWISE NOTED — TOLERANCES — 0.XX ±0.02 0.XXX ±0.005 ANGULAR ± MACHINED SURFACES 63 — DO NOT SCALE —	ITEM	QTY	DESCRIPTION	PART NO.	DWG. NO.	MAT'L SPEC.
	DRAWN AL HOWARD	DATE 6-1-69	TITLE CONTROL LOGIC CIRCUITRY		HEWLETT PACKARD LABORATORY INSTRUMENTS	
	ENGINEER				NEXT ASSY. 09100-66551	
	APPROVED				D 09100-66551	
	SUPERSEDES		FINISH	SCALE		

SHEET —

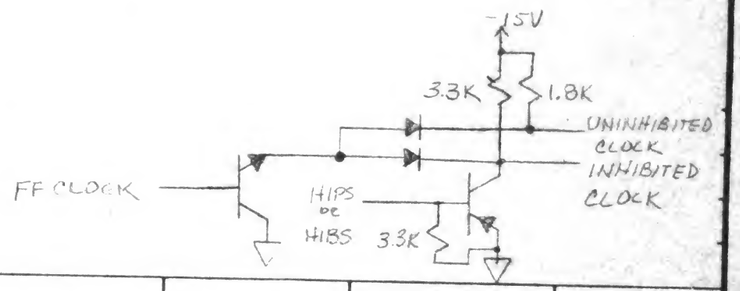
		A-	-	-
SYM	REVISIONS	APPROVED	DATE	



* NUMBER IN THE CIRCLE REFER TO PEC PKG LEAD ARRANGEMENT.

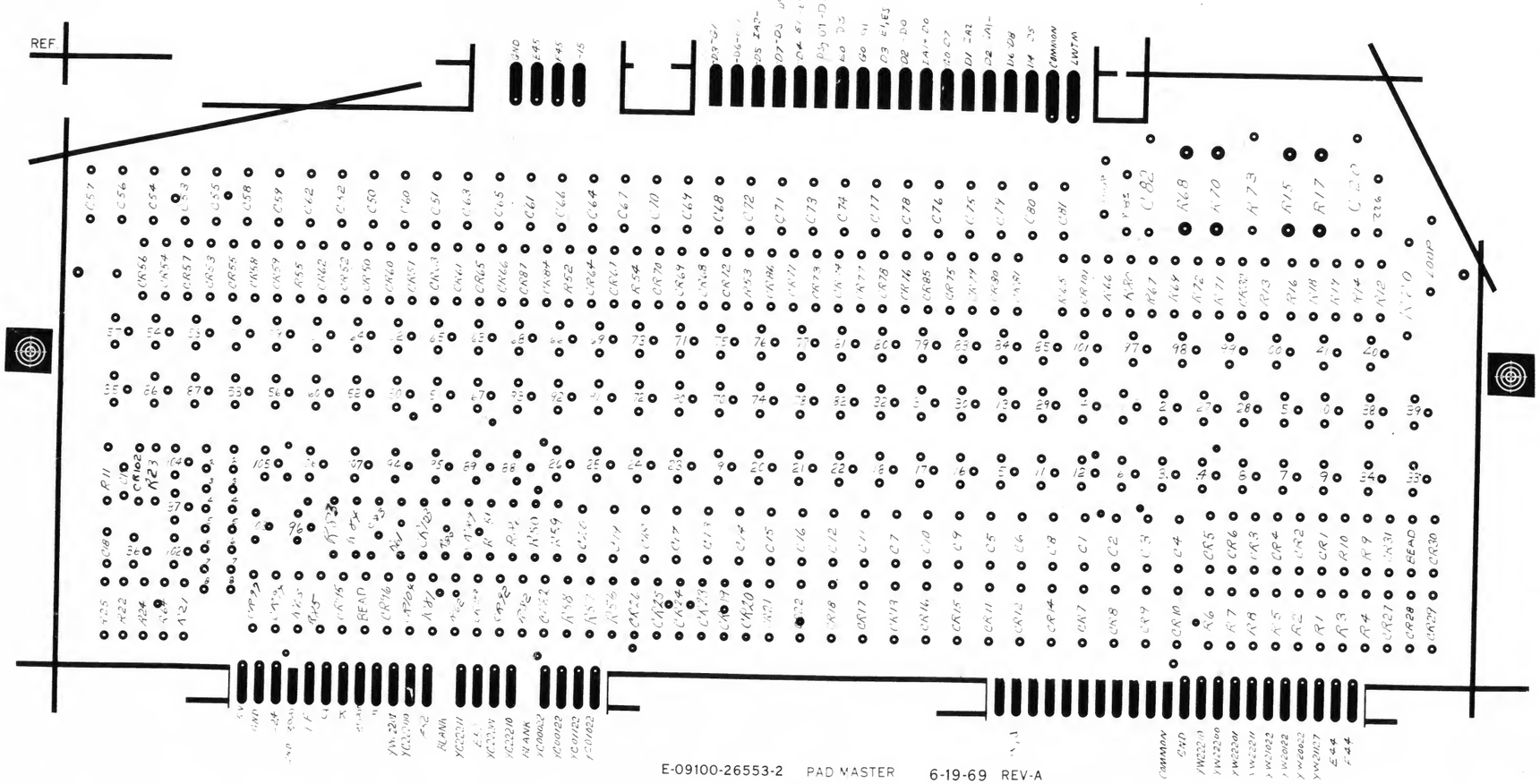


-10V SUPPLY 1/BOARD



ENG. RESP. — DIV.							
UNLESS OTHERWISE NOTED — TOLERANCES —	ITEM	QTY	DESCRIPTION	PART NO.	DWG. NO.	MAT'L SPEC.	
0.XX ±0.02 0.XXX ±0.005	DRAWN JOHN SCOHY	DATE 7-2-68	TITLE J-K FLIP FLOP INHIBIT 10 VOLT SUPPLY		HEWLETT PACKARD LABORATORY INSTRUMENTS		
ANGULAR ±	ENGINEER				NEXT ASSY.		
MACHINED SURFACES 63	APPROVED				A- - -		
— DO NOT SCALE —	SUPERSEDES		FINISH	SCALE	SHEET —		

HP 9280-0001 PRINTED ON DIEPO 1020-10


REF.
GND
E45
R45
+5
DB7 SEG
DB6 SEG
DB5 SEG
DB4 SEG
DB3 SEG
DB2 SEG
DB1 SEG
DB0 SEG
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SYM	REVISIONS	APPROVED	DATE

D - - -

DRIVE RESTOR

CHAR	33 32 31 30	+	−
D0	0 0 0 0	Q81	Q65
D1	0 0 0 1	Q80	Q64
D2	0 0 1 0	Q79	Q63
D3	0 0 1 1	Q78	Q62
D4	0 1 0 0	Q85	Q67
D5	0 1 0 1	Q84	Q68
D6	0 1 1 0	Q83	Q67
D7	0 1 1 1	Q82	Q66
D8	1 0 0 0	Q73	Q57
D9	1 0 0 1	Q72	Q56
D5	1 0 1 0	Q71	Q55
E0	1 0 1 1	Q70	Q54
E1	1 1 0 0	Q77	Q61
E2	1 1 0 1	Q76	Q60
G0	1 1 1 0	Q75	Q59
G1	1 1 1 1	Q74	Q58
IA1	F34, E52	+50	−50
IA2	F34, E52	+51	−53

WORD	44 43 42 41 40		DRIVE TRANSIST
X	00000	+	Q1
Y	00010	+	Q9
Z	00001	−	Q5
P	00101	−	Q6
T	00011	+	Q2
A	01101	−	Q3
K	01010	+	Q10, X
Z	01001	−	Q4
M0	10001	+	Q22
M1	10001	+	Q12
M2	10010	+	Q14
M3	10011	+	Q15
M4	10100	+	Q13
M5	10101	+	Q11
M6	10110	+	Q16
M7	10111	+	Q17
M8	11000	+	Q20
M9	11001	+	Q18
e	11010	+	Q19
a	11011	+	Q24
b	11100	+	Q21
F	11101	+	Q15
C	11110	+	Q11
J	11111	+	Q23

CHARACTERS

WORDS

WRITE CURRENT = READ CURRENT + 10 MA.

PAGE− = F45 + YW02201

(DELAYED ROM CLOCK)

ROM CK. → ⎍⎍

DELAYED ROM CK → ⎍⎍ ± F 100 NSEC. NUM.

(RDM BUFF)

ROM CLOCK DELAY

FF45

2 FERRITE BEADS

ENG. RESP — DIV. 9	ITEM	QTY	DESCRIPTION	PART NO	DWG NO	MAT'L SPEC
UNLESS OTHERWISE NOTED — TOLERANCES — 0 XX ±0.02, 0 XXX ±0.005						
ANGULAR ±						
MACHINED SURFACES 63						
— DO NOT SCALE —						

DRAWN	DATE	TITLE
Bill Hays	7-25-69	WORD AND X-APACTER DRIVERS. 9100 B
ENGINEER		
APPROVED		
SUPERSEDES	FINISH	SCALE

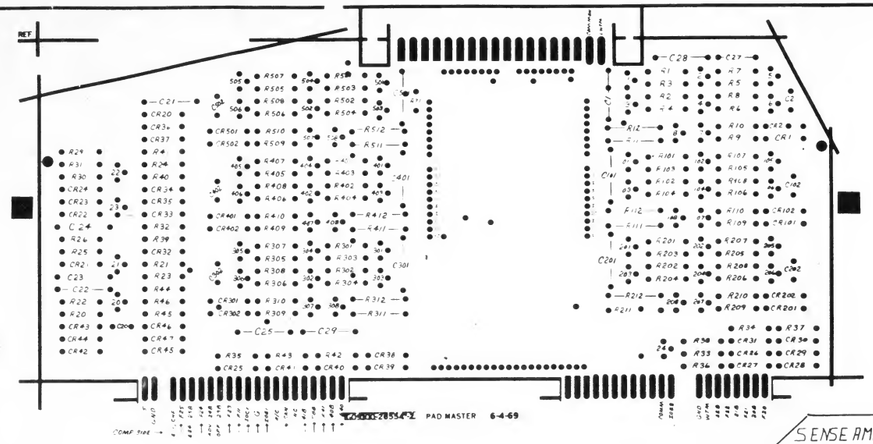
HEWLETT PACKARD
LABORATORY INSTRUMENTS

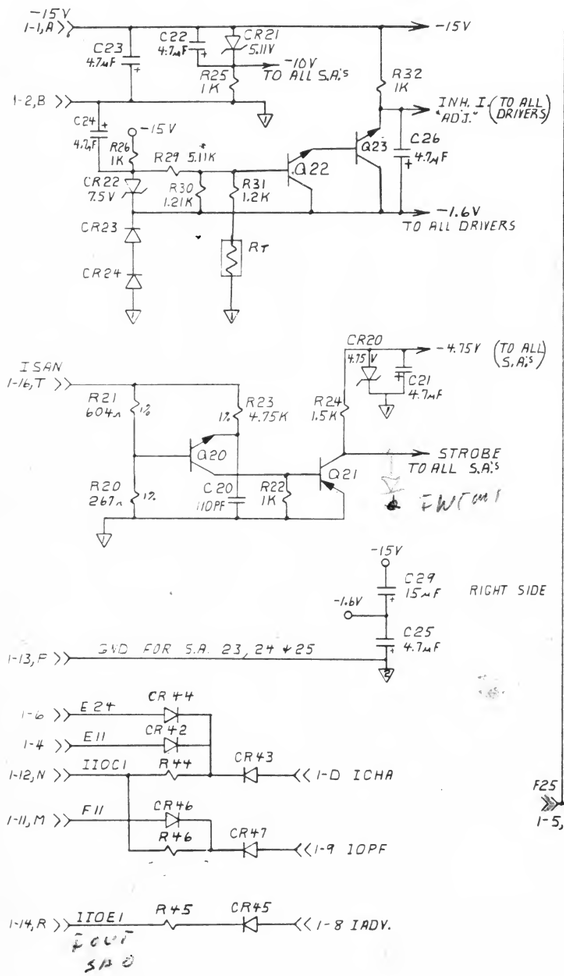
NEXT ASSY. D-09100-66

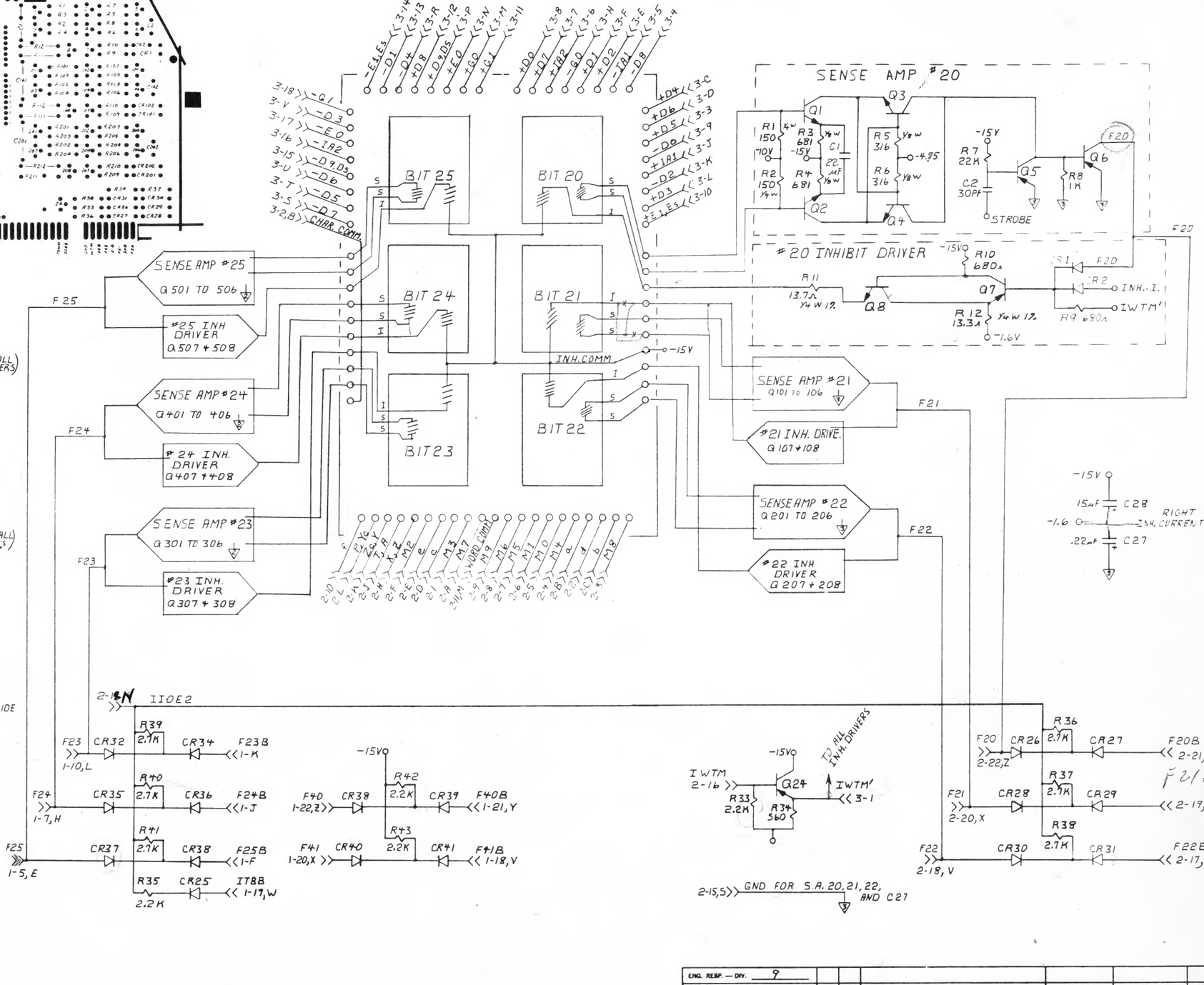
SHEET

HP 9280 0004 PRINTED ON DIEPO 1020-10

SYM	REVISIONS	APPROV'ED	DATE







ENG. RESP. — DIV. 9						
UNLESS OTHERWISE NOTED — TOLERANCES — 0.XX ±0.02 0.XXX ±0.005 ANGULAR ± MACHINED SURFACES 63 — DO NOT SCALE —	ITEM	QTY	DESCRIPTION	PART NO.	DWG NO	MAT'L SPEC.
DRAWN BILL THAYER	DATE 7-30-69	TITLE 9100B SENSE AND INHIBIT AMP. + CORE PLANE.			HEWLETT PACKARD LABORATORY INSTRUMENTS	
ENGINEER Cada	7/30/69					
APPROVED					NEXT ASSY.	
SUPERSEDES		FINISH	SCALE		D-09100 -66554-	

HP 8280 0004 PRINTED ON DIEMO 1020-10

MUX GATE

HEAD DRIVE FF

PRE-AMP

SCHMITT

DE-MUX GATE

SYM	REVISIONS	APPROVED	DATE

A-CHANNEL

B-CHANNEL

C-CHANNEL

MUX FF

PRE-AMP

DE-MUX FF

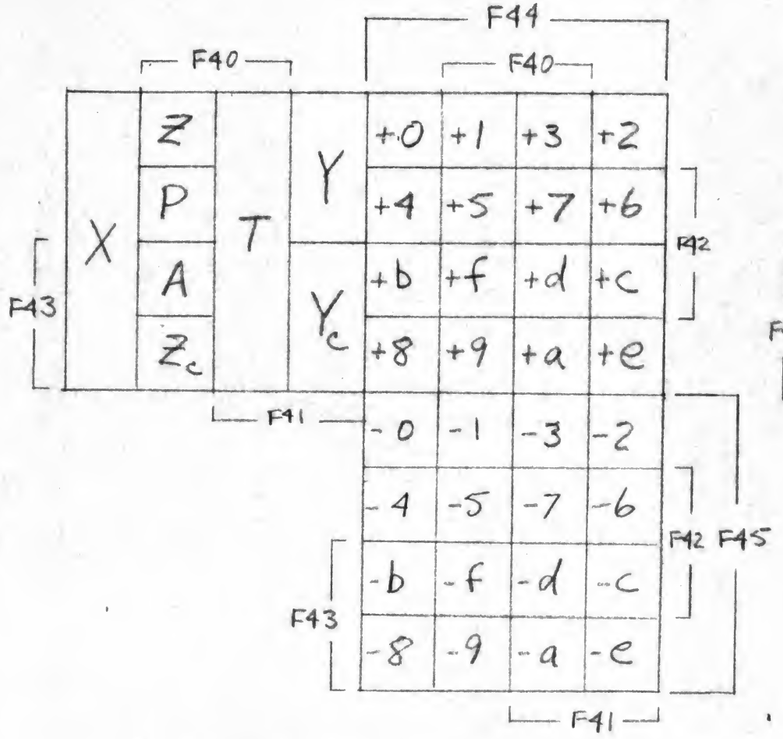
D-CHANNEL (STROBE)

MOTOR ASSEMBLY

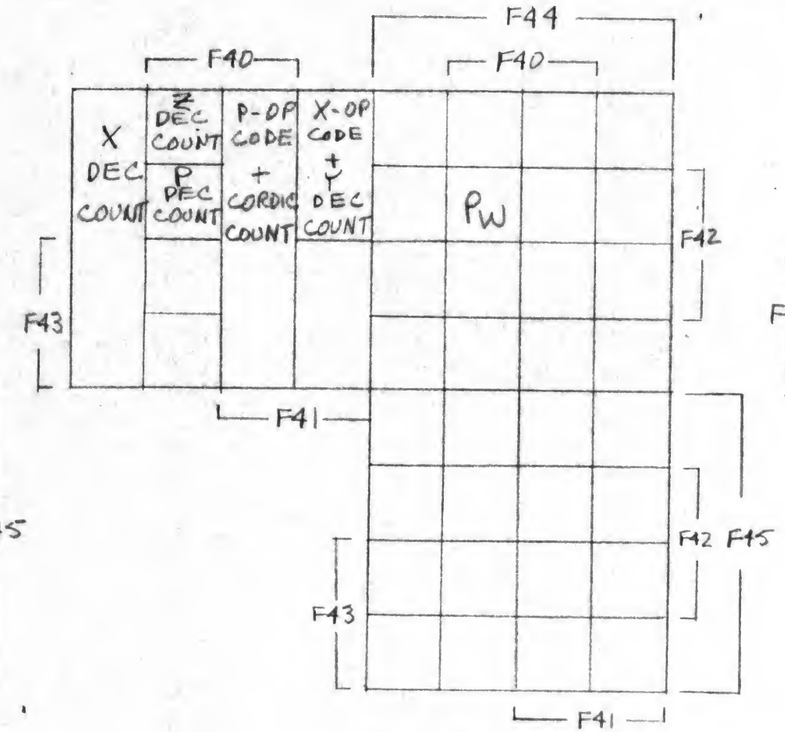
ENTER should read 12 charge - it's intro

ENG. RESP. — DIV.						
UNLESS OTHERWISE NOTED — TOLERANCES — 0.XX ±0.02, 0.XXX ±0.005, ANGULAR ±, MACHINED SURFACES 63, — DO NOT SCALE —	ITEM	QTY	DESCRIPTION	PART NO.	DWG. NO.	MAT'L SPEC.
DRAWN AL Howard 5/28/69	TITLE: Mag Card Reader				HEWLETT PACKARD LABORATORY INSTRUMENTS	
ENGINEER L. Choice 7/3/69					NEXT ASSY. 09100-67923	
APPROVED					D-09100-66591-	
SUPERSEDES	FINISH	SCALE				

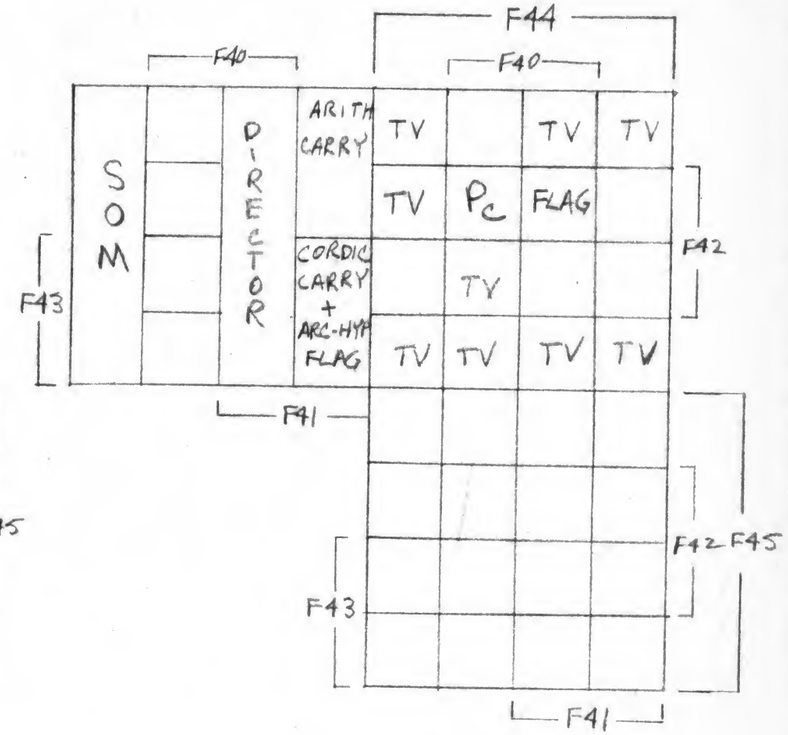
SYM	REVISIONS	APPROVED	DATE
	B- - -		



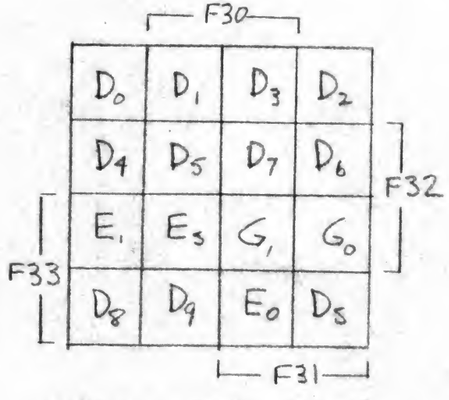
REGISTER MAP



F34·E52
INSTANT ACCESS 1



F34·F52
INSTANT ACCESS 2



CHARACTER MAP
E34

OCTAL WORD	12	11	10	7	6	5	4	3	2	1	0	17	16	15	14	13
	e	9	8	7	6	5	4	3	2	1	0	d	c	f	b	a
CHARACTER	D_5	D_9	D_8	D_7	D_6	D_5	D_4	D_3	D_2	D_1	D_0	G_1	G_0	E_5	E_1	E_0

ENG. RESP. — DIV. _____

UNLESS OTHERWISE NOTED — TOLERANCES —

0.XX ±0.02 0.XXX ±0.005

ANGULAR ± _____

MACHINED SURFACES 63

— DO NOT SCALE —

ITEM	QTY	DESCRIPTION	PART NO.	DWG. NO.	MAT'L SPEC.

DRAWN	DATE	TITLE	HEWLETT-PACKARD
Rick Spangler	5-5-69	9100 B CORE MAP	LABORATORY INSTRUMENTS
ENGINEER			NEXT ASSY.
APPROVED			
SUPERSEDES		FINISH / SCALE	B- - -

SHEET —